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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,529	02/09/2001	Ari Tourunen	324-010100-US(PAR)	8381
2512	7590	11/22/2005	EXAMINER	
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			JUNTIMA, NITTAYA	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/780,529

Applicant(s)

TOURUNEN ET AL.

Examiner

Nittaya Juntima

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 and 30-32 is/are allowed.
- 6) ☒ Claim(s) 25-29, 23-24, 17-29, 31-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/17/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the RCE filed on 4/11/2005.

Claim Objections

2. Claims 7, 16, 17, 22-24, and 30-32 are objected to because of the following informalities:

- in claim 7, lines 2 and 3, “the” should be “a” to avoid lack of antecedent basis;
- in claim 16, line 4, “the handover” should be changed to “a handover” and
“a” should be removed;
- in claim 17, line 7, “a” should be changed to “the” to refer to the network
element recited in the preamble;
- in claim 22, line 4, a colon is missing after “comprising;”
line 18, “a transmitter” should be changed to “the network element” in
order to be consistent with the preamble;
- in claim 23, line 5, “a recipient” should be changed to “the terminal” in order to
be consistent with the preamble of claim 22
- in claim 24, line 5, “a recipient” should be changed to “the terminal” in order to
be consistent with the preamble of claim 22;
- in claim 30, line 18, “a transmitter” should be changed to “the terminal” in order to
be consistent with the preamble;
- in claim 31, line 6, “a recipient” should be changed to “the network element” in order

to be consistent with the preamble of claim 30;

- in claim 32, line 6, "a recipient" should be changed to "the network element" in order to be consistent with the preamble of claim 30.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 17-21, 23, 24-29, 31 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. In claim 17, the limitation "the received convergence protocol packets" in lines 12-13 of the claim is vague and indefinite. It cannot be determined from the claimed language as how could these received convergence protocol packets be the same as those recited in line 11 of the claim. Note that the packets in line 11 must refer to packets received when the terminal operates as a receiver receiving packets transmitted by the network element (as the specification does not support having a counter for receiving packets when the terminal operates as a transmitter as recited in the preamble). However, the received packets in lines 12-13 refer to the packets received by the network element when the terminal operates as a transmitter. Therefore, the claim is vague and indefinite. The office is interpreting the received packets in lines 12-13 as different packets than those mentioned in line 11 of the claim.

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6. Regarding claims 23, 24, 31, and 32, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

7. In claim 25, similar to claim 17, the limitation "the received convergence protocol packets" in lines 13-14 of the claim is vague and indefinite. It cannot be determined from the claimed language as how could these received convergence protocol packets be the same as those recited in line 12 of the claim. Note that the packets in line 12 must refer to packets received when the terminal operates as a receiver receiving packets transmitted by the network element (as the specification does not support having a counter for receiving packets when the terminal operates as a transmitter as recited in the preamble). However, the received packets in lines 13-14 refer to the packets received by the network element when the terminal operates as a transmitter. Therefore, the claim is vague and indefinite. The office is interpreting the received packets in lines 13-14 as different packets than those mentioned in line 12 of the claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 17-20 and 25-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Ejzak et al. ("Ejzak") (USPN 5,444,718).

Regarding claim 17, Ejzak teaches a terminal (transmitter 100 in Fig. 1) comprising:

Means of a counter (125 in Fig. 1) for defining a data packet number for convergence protocol packets (data packets received from upper layer control 50 and transmit buffer 110) to be transmitted between the terminal (a transmitter 100 in Fig. 1) and a network element (a receiver 200 in Fig. 2, e.g. a host, col. 1, lines 21-25). See col. 2, lines 20-29 and 50-63.

Means for transferring (transmit controller 120 in Fig. 1) the convergence protocol packets to be transmitted, to a link layer to be transmitted (col. 2, lines 57-67 and col. 3, lines 5-10).

Means of a counter for defining a data packet number for received convergence protocol packets (since transmitter 100 also includes a receiver 200, col. 2, lines 50-56, and the receiver controller stores the receive packets at locations indexed by the sequence numbers appended to the packets and tracks the received packets, col. 3, lines 30-39, 45-62, therefore, the receiver 200 portion of the transmitter 100 must include means of a counter to keep track of the receive packets).

Means for receiving acknowledgements of received convergence protocol packets from the network element (periodic status control message received at transmitter 100 from receiver 200, col. 4, lines 7-12).

Means for transmitting identification data (identification data is not defined, reads on data contained in a status control message that indicate which packets were not received when the transmitter 100 with a receiver 200 operates in a receiving mode and the receiver 200 operates in a transmitting mode) of lost convergence protocol packets (not received packets) on the link layer to the network element in response to the link layer being not capable of securing a reliable transmission of the convergence protocol packets (means for transmitting data contained in the

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status control message must be included since the status control message is sent to the receiver 200 when the transmitter 100 with a receiver 200 operates in a receiving mode on a full duplex mode, col. 2, lines 50-56 and col. 4, line 7-12, 22-36).

Regarding claim 18, means for identifying the lost convergence protocol packets on the link layer to the network element (the status control message) by defining a number of the lost convergence protocol packets and a data unit sequence number of the link layer that is assumed to be received next (when the transmitter 100 operates in a receiving mode, col. 2, lines 50-56, the receiver portion of the transmitter 100 would transmit the status control message indicating which packets were not received, e.g. packets no. 51 and 52, which inherently identifies that the packet to be received next for retransmission must be the first packet not received, e.g. packet no. 51, col. 4, lines 7-12, col. 5, lines 56-61, col. 6, lines 9-17).

Regarding claim 19, Ejzak teaches means for identifying each lost convergence protocol packet separately to the network element (the status control message) by defining a link layer sequence number (not defined, reads on NR+i number set to binary zero in “bmf” field which associates to each packet not received over the radio link) associated with each lost convergence protocol packet (when the transmitter 100 operates in a receiving mode, col. 2, lines 50-56, the receiver portion of the transmitter 100 would transmit the status control message indicating which packets were not received, i.e. NR+i set to binary zero in “bmf” field, col. 4, lines 7-12, 18-36, col. 5, lines 44-61).

Regarding claim 20, Ejzak teaches means for identifying the link layer sequence numbers (not defined, reads on NR+i numbers set to binary zero in “bmf” field which associate to packets not received over the radio link) associated with each lost convergence protocol packet,

separately (when the transmitter 100 operates in a receiving mode, col. 2, lines 50-56, the receiver portion of the transmitter 100 would transmit the status control message indicating which packets were not received, i.e. NR+i set to binary zero in "bmf" field separate from NR and NL fields as shown in Fig. 3, col. 4, lines 7-36, col. 5, lines 44-61).

Claims 25-28 are network element claims containing similar limitations to terminal claims 17-20, respectively, and are therefore rejected under the same reason set forth in the rejection of claims 17-20, respectively.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 21 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejzak et al. ("Ejzak") (USPN 5,444,718) in view of Wager et al. ("Wager") (USPN 6,519,223 B1).

Regarding claim 21, Ejzak fails to teach that means for transmitting the identification data of the lost convergence protocol packets on the link layer to the network element in a link layer data unit comprising a command to move a receiving window.

However, as shown in Fig. 3, Wager teaches means for transmitting the identification data of lost convergence protocol packets (lost convergence protocol packets read on all PDUs 220 carrying segments of the discarded SDU 210) on the link layer to a receiver (250) in a link layer data unit comprising a command to move a receiving window (a move receiving window

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request message 280 sent to the data link layer 60b of the receiver 250). See col. 3, lines 63-col. 4, line 13, 28-47, and col. 5, lines 49-col. 6, line 3.

Given the teaching of Wager, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Ejzak to include means for transmitting the identification data of the lost convergence protocol packets on the link layer to the network element in a link layer data unit comprising a command to move a receiving window. The motivation/suggestion to do so would have been to enable the terminal when operates as a transmitter to ensure that the PDUs receiving by the receiver, e.g. the network element, that carry a particular SDU are discarded in the receiver buffer of the receiver as taught by Wager (col. 5, lines 57-64).

Regarding claim 29, Ejzak fails to teach that means for transmitting the identification data of the lost convergence protocol packets on the link layer to the terminal in a link layer data unit comprising a command to move a receiving window.

However, as shown in Fig. 3, Wager teaches means for transmitting the identification data of lost convergence protocol packets (lost convergence protocol packets read on all PDUs 220 carrying segments of the discarded SDU 210) on the link layer to a receiver (250) in a link layer data unit comprising a command to move a receiving window (a move receiving window request message 280 sent to the data link layer 60b of the receiver 250). See col. 3, lines 63-col. 4, line 13, 28-47, and col. 5, lines 49-col. 6, line 3.

Given the teaching of Wager, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Ejzak to include means for transmitting the identification data of the lost convergence protocol packets on the link layer to the terminal in

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a link layer data unit comprising a command to move a receiving window. The motivation/suggestion to do so would have been to enable the network element when operates as a transmitter to ensure that the PDUs receiving by the receiver, e.g. the terminal, that carry a particular SDU are discarded in the receiver buffer of the receiver as taught by Wager (col. 5, lines 57-64).

Allowable Subject Matter

12. Claims 23, 24, 31, and 32 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

13. Claims 1-16, 22, 30 are allowed. The prior art alone or in combination fail to teach or make obvious on the following when considered in combination with other limitations in the claims:

Claims 1 and 9: updating a counter value of the recipient to correspond to a counter of the transmitter such that the lost convergence protocol packets are taken into account in the counter value.

Claims 22 and 30: means for updating a counter value to correspond to a counter value of the network element/terminal by taking into account a number of the lost convergence protocol packets in the counter value.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nittaya Juntima
November 16, 2005




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